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**METHOD TO GENERATE A PSEUDO-RANDOM SEQUENCE OF
MULTI-CARRIER DATA SYMBOLS, AND RELATED TRANSMITTER
AND RECEIVER**

BACKGROUND OF THE INVENTION

[0001] The present invention relates to a method to generate a pseudo-random sequence of multi-carrier data symbols by producing a pseudo-random bit sequence by repetitively generating a pseudo-random sequence of L bits, L being a first integer value and packetizing into multi-carrier data symbols thereby using N bits of the pseudo-random bit sequence per multi-carrier data symbol, N being a second integer number, to thereby generate the pseudo-random sequence of multi-carrier data symbols, a generator of a pseudo-random sequence of multi-carrier data symbols comprising scrambling means, adapted to repetitively generate a pseudo-random sequence of L bits, L being a first integer value, to thereby produce a pseudo-random bit sequence and packetizing means, adapted to packetize into multi-carrier data symbols using N bits of said pseudo-random bit sequence per multi-carrier data symbol, N being a second integer number, to thereby generate the pseudo-random sequence of multi-carrier data symbols, a multi-carrier transmitter including a pseudo-random sequence generator and transmitting means coupled to the pseudo-random sequence generator, and adapted to transmit a pseudo-random sequence of multi-carrier symbols generated by the pseudo-random sequence generator over a communication channel, and a